Sir John Gorst and see whether we cannot do something to spur on the teaching of the metric system in the schools, and thereby familiarising the imagination of the rising generation to a system which perhaps ultimately will be the only one they will be permitted to use. With regard, however, to the second proposition in the order of statement by the Chambers of Commerce, you will have gathered from what I have said that I should see very great difficulties in compelling every class in the community suddenly to alter its familiar and habitual practice in regard to the weights and measures in which it deals. If I may venture to say so, I hardly think that the Chambers of Commerce, or even the trade union congresses, are adequate representatives of the kind of feeling which would probably animate the great mass of small retail dealers and those who buy their goods from such dealers, who would suddenly find all their familiar landmarks swept away and unfamiliar things put in their places. You represent the great commercial interests of the country, and possibly you might find a degree of opposition to your proposals which you little anticipated if you were to endeavour to drive into every cranny of our social system changes which no doubt would be very beneficial as applied to the great industries and manufactures. That leads me to ask—if the advantages of the metric system as compared with the existing system be so great as you tell me they are, as I fully believe they are—whether they could not now be adopted, for instance, in shipbuilding yards on the Clyde, in the great machine-making industries of Manchester, and in such commercial centres as Belfast. I think one gentleman did mention a firm which had employed it, and which had no difficulty in employing it. The engineers do it now, and they have not found much difficulty in doing it, and they have derived much benefit from it. Surely it is within the province of private enterprise to extend that system to every one of the great industries which bring us into relation with foreign countries. The foreign meat trade is already largely carried on on a decimal system, but not the metric. What I want to insist upon is that, while it is of great importance to render such a change easy, it is within the province of private enterprise to carry it out gradually in those great industries. I cannot but believe that if you represent, as I am sure you do, the feeling of the great industries in this matter, we shall find, without any compulsion on the part of the Government at all, the metric system making its way through all the leading industries. It must be legalised certainly, but, when legalised, it will make its way. It is evident that, in so far as that process is carried on, you would enormously facilitate that ultimate compulsory change to which we all look forward, but which, I think, could not, with safety or advantage, be undertaken by the Government till public opinion is more prepared for it than at present. The public opinion with which we have got to deal, and which we are bound to consider, is not the public opinion of the great manufacturers alone, but the public opinion of every man and woman you meet in the street. While I look forward to the time, and no distant time, when they will adopt the change without difficulty and without repugnance, I should like to see private enterprise do more than it has done up to the present to show that the change can be adopted without inconvenience, and that it carries with it all the benefits which I, in common with you, firmly believe to be attached to the metric system, and which it is impossible to associate with the arbitrary, perverse, and utterly irrational system under which we have all had the misfortune to grow up."

NOTES.

A LARGE and influential deputation is to wait on the Duke of Devonshire at noon to-day to urge on the Government the importance of introducing, at an early date, a Bill appointing a Statutory Commission to give effect to the recommendations of the late Royal Commission on the London University question.

THE first meeting of the General Committee of the Huxley Memorial was held, under the presidency of the Duke of Devonshire, yesterday, as we went to press. The chief object of the meeting was to decide the form which the memorial should take. The long list of the General Committee, consisting of the names of men of light and leading in all parts of the world, is a striking testimony to Huxley's greatness.

THE Egyptian Government have determined to commence a geological survey of the "land of Egypt." The work will be begun next year, and will take about three years for its completion, the estimated cost being £25,000. To carry out the proposed plans, a wise selection of a geologist has been made in the person of Captain H. G. Lyons, R.E., who is at present engaged (under the Public Works Department of the Egyptian Government) in superintending the excavation of the ruined temples of Philæ. Captain Lyons has already written an excellent article on the "Stratigraphy and Physiography of the Libyan Desert of Egypt" in the Geological Society's *Journal* for 1894, and has also made extensive explorations on the Upper Nile. Had the Egyptian Government taken this step some years ago, they might have saved some considerable sums of money which they have squandered in searches for petroleum and various minerals, undertaken at the instigation of inexperienced and interested advisers.

A SHARP earthquake shock occurred at Athens at 7.30 on Wednesday morning, and was also felt at Chalcis, Livadia, Thebes, and Corinth.

DR. J. D. GILCHRIST has been appointed Marine Biologist to the Government of the Cape of Good Hope. He will be charged with the investigation of the marine resources of the country, especially in their practical relations to the fisheries.

A COMMITTEE has been formed to make arrangements for presenting to Prof. Adolf Bastian, Professor of Ethnology in Berlin, a volume of original essays on various branches of ethnology, anthropology, and kindred sciences, when he attains his seventieth birthday in June next.

WE learn from the *Lancet*, that the Health Committee of the Glasgow Town Council has decided to establish and equip a complete bacteriological department in the sanitary buildings now in course of erection. The laboratory is to be in charge of an expert in bacteriology.

THE *British Medical Journal* states that Prof. Loeffler, of Greifswald, the discoverer of the diphtheria bacillus, has received from the French Government the Officer's Cross of the Legion of Honour.

DR. CARTWRIGHT WOOD has been granted £100 out of the Goldsmiths' Company's grant allocated by the Committee of the Conjoint Laboratories of the Royal Colleges of Physicians and Surgeons, for investigations as to improved means of treating horses with a view to obtaining diphtheria antitoxic serum in a shorter time than is possible by the methods hitherto in use.

OUR contemporary *Invention* has lately been brought out in a popular penny series. We hope and believe that in this form it will play a useful part by showing to a wide circle of readers some of the work that has been, and is being, done in the world of science, and by indicating how intimately scientific research is connected with industrial progress.

WE notice with regret the death of Mr. J. Traill Taylor, editor of the *British Journal of Photography*. He was in his sixty-ninth year, and was widely known and respected in photographic circles. We have also to record the death of Prof. George Lawson, Professor of Chemistry and Mineralogy in the University of Halifax, Nova Scotia, and formerly President of the Royal Society of Canada.

THE death is announced of Surgeon-Major George Edward Dobson, F.R.S., at the age of forty-seven. He was awarded the gold medal of the Dublin Pathological Society in 1867 for his essay on the diagnosis and pathology of the injuries and diseases of the shoulder-joint. He also wrote "Medical Hints to Travellers," published by the Royal Geographical Society;

"Monograph of the Asiatic Chiroptera," 1876; "Catalogue of the Chiroptera in the British Museum," 1878, a complete natural history of the order; and "Monograph of the Insectivora, Systematic and Anatomical," in which the zoology and anatomical structure of the species were concurrently investigated; and he was the author of numerous other articles, published in the *Proceedings* of various scientific societies and in scientific journals. He was elected into the Royal Society in 1883, and was a corresponding member of the Academy of Natural Sciences of Philadelphia and of the Biological Society of Washington.

A GREAT Frenchman has just passed away in the person of M. Barthélemy Saint-Hilaire. He was born so far back as August 19, 1805, and the fiftieth anniversary of his election into the Academy of Moral and Political Sciences was celebrated in 1889 at the Institute of France. Like many other men in France, he was both philosopher and statesman. He translated the complete works of Aristotle, and was the author of numerous original works. He spent some time in a journey to Egypt with M. Ferdinand de Lesseps, to explore the Isthmus of Suez; and he shared to the full the firm belief of the creator of the Suez Canal in the feasibility of the undertaking. After his return from Egypt he published his "Letters on Egypt," 1856, and "Egypt and the Great Suez Canal," 1857. In 1860 M. Saint-Hilaire published his work on "Buddha and his Religion"; in 1865 appeared his "Mahomet and the Koran," preceded by an introduction on the Mutual Duties of Philosophy and Religion, and in 1866 his "Philosophy of the Two Ampères." He was Secretary-General of the Presidency of the French Republic, after the war of 1871. Upon the fall of M. Thiers, he resumed his great translation of Aristotle. In 1880, at the age of seventy-five, he became Minister for Foreign Affairs in the Jules Ferry Cabinet, from which he retired on the accession to power of Gambetta in 1881.

A COMPLETE change in the type of weather took place over the British Islands during the latter part of last week. The *Daily Weather Report* of the 23rd inst. showed that an area of high barometric pressure was spreading over our western coasts from the Atlantic, while an area of low barometric pressure, which had formed over the North Sea, was crossing the Netherlands. During the following days this disturbance passed to the south of Italy, and, in connection with very high barometer readings in Scandinavia, its passage caused strong north-easterly and easterly gales in the south and east of England, and very high seas in the English Channel, while on the continent it was accompanied by much snow and sleet. Although the force of the wind was not so strong inland, the pressure recorded at Greenwich Observatory on Sunday was 16 lb. on the square foot, which by the revised factor for the conversion of wind pressure to velocity is equivalent to a rate of about 76 miles in the hour.

THE terms of the competition for the Thousand Guinea Prize offered by the *Engineer* for mechanical road carriages are published in the current number of our contemporary. The limit of weight has been fixed at two tons, and the speed at ten miles an hour; while in the case of oil being used as the motive power, the flashing point is fixed at 73° F. The competition, it is thought, cannot take place before October 1896, when the various vehicles—two classes of two tons each, and two of one ton each—will be required to run 200 miles, and Sir F. Bramwell, Mr. J. A. F. Aspinall, and Dr. John Hopkinson will act as judges.

THE convention between Italy and Switzerland for the construction of the Simplon Tunnel was signed at Berne on Monday. The programme of the works to be followed is that already approved by the Jura-Simplon Company, the Swiss Federal Council, and the Italian Government. When the tunnel is completed, the nearest seaport for French Switzerland, Haute Savoie, and the Valais will no longer be Marseilles, but Genoa, and the shortest route from Milan, Piacenza, Venice, Genoa, and Trieste to Paris will be through the tunnel.

WE learn through the *Times* that the United States Nicaragua Canal Commission, appointed by President Cleveland last spring, has reported that it is neither advisable nor practicable to attempt the construction of a canal upon the data at present available. New surveys are needed before any final judgment can be formed, but the provisional estimate of the cost by this Commission is about £27,000,000, nearly double the Maritime Canal Company's conditional estimate. That Company's report is very strongly criticised in detail and in general, to the effect that it is not based on a thorough knowledge of the physics of the site. Their proposed dam in Ochoa is regarded as unsafe, dangerous, and subject to floods, the proposed entrance to Greytown Harbour is deemed wrongly placed, and the canal itself is considered inadequate in width and depth. The numerous technical criticisms of this report all point in the same direction—namely, that no such canal as that contemplated by the Maritime Company can be built in the way which they design, or for the money which they would expend upon it.

THE opening meeting of the Conference convened by the Board of Trade on the subject of the revised regulations proposed to be made under the Electric Lighting Acts, 1882 and 1888, was noted in our last issue (p. 60). We extract from the *Times*' report of the second day's proceedings the more important decisions arrived at. The Chairman, Sir Courtenay Boyle, stated that he had carefully considered the very important representation made the previous day on the subject of the definition of low pressure, and he thought it would be for the convenience of those interested if a decision were reserved for a short time, so that the Board of Trade might appoint a small committee, not exceeding three, of expert advisers, carefully to consider the scientific aspect of the question, and to make a suggestion to the Department. This was approved by the meeting. The discussion of Clause 35 of the revised regulations relating to street boxes, pointed to the need for a definition of street boxes, and led the Chairman to suggest that the clause should apply only to street boxes containing transformers. It was agreed that the clause should read thus: "In the construction of street boxes used as transformer chambers reasonable means shall be adopted to prevent as far as possible any influx or accumulation of gas or water either from the adjacent soil or by means of pipes; and ample provision shall be made by ventilation or otherwise for the immediate escape of any gas which may by accident have obtained access to the box, and for the prevention of danger from sparking." The Chairman promised to consider whether the Board of Trade could make a regulation for the ventilation of street boxes of a certain dimension. Opposition was offered to Clause 37, which provided that "the casing of any high-pressure electric lines shall be continued within street boxes," and the Chairman said the clause would be struck out on the understanding that it might be necessary to continue the old regulation, so as to prevent danger arising by high-pressure lines passing through transformer chambers not being properly cased. Objections having been raised to Clause 38, relating to converting stations, the Chairman said he thought the old regulation would better meet the case. That regulation was as follows: "Converting stations, or points in a system of distribution to which a high-pressure supply is given from generating stations, and from which a low-pressure supply is given to one or more consumers, and which are not on the consumer's premises, shall be established in suitable places, which are in the sole occupation and charge of the undertakers." After discussion the Chairman accepted Clause 41 in the following form: "A suitable safety fuse or other automatic disconnector shall be inserted in each service line as close as possible to the point of entry in any consumer's premises, and contained within a suitable locked or sealed receptacle of fireproof construction, except in cases where the service line is protected by fuses in a street box." A few other regulations having been discussed, the proceedings of the Conference terminated.

A RARE British bird invites the attention of ornithologists in the Fish House of the Zoological Society's gardens. This is a Spotted Redshank (*Totanus fuscus*) in winter plumage, recently obtained from the fens of Lincolnshire, being the first individual of this species that has been received by the Society.

IT is well known that liquid ammonia relieves the effects of the stings of bees. A correspondent informs us that a much more effectual antidote is the mixture known as ammoniated tincture of quinine. On several occasions, when stung by bees, he found that the quinine mixture would give much quicker and greater relief than ammonia alone.

WITH reference to their letter on the thermal conductivity of rocks, published in our issue of the 7th inst., Messrs. Peirce and Willson desire to say that the phrase "recent discussion in NATURE" refers to communications printed in these columns previous to June 20. When they wrote their letter, they had not seen the account of the experiments of Lord Kelvin and Mr. Murray, published in NATURE of that date (vol. lii. p. 182).

A CORRESPONDENT writes:—"On November 19 of this year, some yardsmen were turning over some English oak planks, prior to stacking them, at Messrs. Harry Hems and Sons at Exeter, when one of the men put his hand in a knot-hole that occurred in a 6-inch thick plank. He instantly withdrew it with a cry, and some wasps flew out. On examination, the hole was found to contain a large nest with sixty or seventy wasps in it. The plank and its living contents had come, with a number of others, from Lincolnshire by rail a few days before. Probably this long ride for a wasp's nest beats the record!"

SOME of the officers of the new Ashantee Expedition, who have leisure for sporting pursuits on their march up to Coomassie, will do well to secure for the National Collection additional specimens of the Royal Antelope (*Neotragus pygmæus*), which are much wanted. This little animal, discovered by Bosman in 1704, and named the "King of Harts," and subsequently figured in Seba's "Thesaurus," although so long known to science, is still a scarce object in our museums. In fact, as Messrs. Sclater and Thomas tell us in their "Book of Antelopes," all the small members of this group, both of West and East Africa, are still very imperfectly known, and additional specimens and information on them are much required.

IN the course of his researches on the smaller mammals of South America, Mr. Oldfield Thomas, of the British Museum, has made a brilliant discovery. A small rodent, not quite so big as a rat, which he has lately named *Cœnolestes obscurus*, turns out to be closely related to, and a surviving representative of, some of the Fossil Marsupials recently described by Ameghino from the Santa Cruz beds of Patagonia. It therefore belongs to a new family, quite distinct from all hitherto known existing forms of the Marsupial order. Mr. Thomas's paper on this subject will be read at one of the Zoological Society's next meetings.

"CARBONIC snow," or carbonic acid crystals, form the subject of an interesting paper by MM. P. Villard and R. Jarry in the November number of the *Journal de Physique*. Using a toluene thermometer, they found that in the open air it kept at a constant temperature of – 79° C. This is in fact its boiling point, but whatever liquid is formed is at once frozen by the cold caused by evaporation. Hence the gas is only slowly given off. To prevent radiation, it should be kept in a glass silvered on the outside. The solid "snow" is, by the way, heavier than the liquid carbonic acid, in spite of its apparent lightness. No hoar-frost forms on the surface, owing to the constant evolution of the gas. Another vexed question is that of the temperature of the solution of the "snow" in ether. Accurate measurements showed that, contrary to the popular idea, this solution is not a freezing mixture, its temperature being – 79° C., the same as that of the solid. Methyl chloride does, on the other hand, form a freezing mixture of the temperature – 85° C. In a flat dish this becomes – 88° C., and when a current of air is blown through, – 90° C. In a vacuum of 5 m.m. of mercury, the temperature falls as low as – 125° C. Since this is below the critical temperature of oxygen, there seems no reason why oxygen should not be liquefied by the aid of carbonic acid alone.

THE common crow has a bad reputation among agriculturists, but a report, by Prof. W. B. Barrows and Mr. E. A. Schwatz, on his habits in the United States (*Bulletin* No. vi., U.S. Department of Agriculture), shows that even his character is not so black as it has been painted. The most important charges brought against the crow are that it pulls sprouting corn, injures corn in the milk, destroys cultivated fruit, and feeds on the eggs and young of poultry and wild birds. All these charges are sustained by the results contained in the present report of the examination of the contents of nearly a thousand Corvine stomachs. Crows do certainly feed upon the substances named, but the extent of the injury they do is quite another matter. In order to ascertain whether the sum of the harm done outweighs the sum of the good, or the contrary, the different kinds of food found in the stomachs have been reduced to quantitative percentages, and then compared. The results show that only 3 per cent. of the total food of the crow consists of sprouting corn and corn in the milk; the remaining 97 per cent. is chiefly waste grain picked up here and there, mainly in winter, and of no economic value. In the case of cultivated fruits, the loss due to crows appears to be trivial. The same is true of the eggs and young of poultry and wild birds, the total for the year amounting, in the cases examined, to only 1 per cent. of the food. As an offset to his bad habits, the American crow is credited with the good done in destroying noxious insects and other injurious animals. Insects form 26 per cent. of his entire food, and the great majority of these are grasshoppers, beetles, weevils, cutworms (larvæ of Noctuidæ), and other injurious kinds. To the same side of the scale must also be added the destruction of mice, rabbits, and other injurious rodents by the crow. Wherefore Mr. Hart Merriam concludes, in his introductory note to Messrs. Barrows' and Schwarz's valuable report, that, in summing up the benefits and losses resulting from the food habits of this bird, the good exceeds the bad, and that the crow is a friend rather than an enemy of the farmer.

THE efficiency of windmills and agricultural apparatus forms the subject of a note, by Prof. Cleveland Abbe, in the *Monthly Weather Review*. There are many important and expensive agricultural machines, such as reapers, mowers, windmills, and pumps, to say nothing of portable steam-engines, that are needed on large farms, or the centrifugal separators used in dairies, that fail to give satisfaction because of some inherent mechanical defect. The most efficient machine is that which produces the best result with the least possible waste of power. Prof. Abbe suggests that there be some recognised authority to come between the manufacturer and the farmer; some one who shall "standardise" any piece of apparatus when desired, and certify as to the amount of power that is lost, or as to the efficiency of the machine when working under its best possible condition. Mechanical engineers are accustomed to determine very accurately the relation between the work done and the force expended; but no arrangement has yet been organised in America, though in England the Royal Agricultural Society does something by means of which the farmer may obtain, for a small fee, accurate information as to the efficiency of the windmills, pumps, and other apparatus used by him. Such tests are sometimes applied, but oftentimes imperfectly, to machines that are offered in competition for prizes at shows; but the results apply only to those specific samples, and not to others that are ordinarily found in the market. There are standards for the sale of illuminating gas, electricity, and other sources of energy. The time may come, concludes Prof. Abbe, when Governments will standardise and regulate the sale of the machines for the conversion of force or the doing of work.

The current number of the *Journal de Physique* contains a description of an instrument for measuring the specific inductive capacity of liquids or solids, designed by M. Pellat. The instrument consists essentially of two Kelvin attracted disc electrometers, in which the two movable discs are rigidly connected together. The two attracting discs are in metallic connection, and one of them can be moved by means of a micrometer screw. The attracted discs are attached to the arm of a delicate balance, the position of the beam being observed by a microscope. An air damper attached to the beam serves to check the oscillations, which otherwise would render the measurements extremely tedious. Weights are used to roughly counterpoise the weight of the attracted discs when the whole instrument is at one potential. The final adjustment is made by means of a fine spiral spring, attached to the arm of the balance, and which can be stretched more or less by means of a micrometer screw. This spring has the advantage of increasing the range of potential difference over which the position of the balance is stable. The substance to be examined—if a solid in the form of a slab, or if a liquid contained in a glass dish—is placed between the fixed attracting disc and its movable disc, being supported on three small glass blocks which rest on the guard-ring. Readings of the position of the movable attracting disc are taken with and without the substance in place, and from the difference of the readings the specific inductive capacity is calculated. The sensitiveness of the instrument is such that the author has been able to measure, roughly it is true, the specific inductive capacity of mica, using a plate of this substance only 0·013 c.m. in thickness. In the case of liquids, measurements have been made in which the one set of plates, attracting plate, attracted plate and guard-ring, were entirely immersed in the liquid. The effect of capillarity on the stem joining the two attracted discs was to very much increase the range of potential difference giving stability of the balance. It was found that at the moment of applying the difference of potential an initial and very sharp movement always takes place when the balance is not perfect; so that the measurements could be made with an accuracy as great as in the case of solid dielectrics.

We have received from M. A. Lancaster, of the Royal Observatory, Brussels, a pamphlet containing his communications to the Congress of the Science of the Atmosphere, held at Antwerp last year: (1) On synoptic weather charts, advocating the establishment of an international meteorological institute, acting on the part of all countries, and the publication of weather charts for extensive areas. The question of an international institute for meteorology has frequently been discussed, and at the recent meeting of the International Meteorological Committee at Upsala it was decided that the idea was not practicable. But the author points out that in the cases of geodesy and metrology such institutions have long been established. (2) On the nature of the wind. The principal object of this paper is to draw attention to the similarity of the views of the late M. Houzeau (formerly director of the Brussels Observatory) to those of Prof. S. P. Langley, expressed in his treatise on the internal work of the wind (Nature, vol. xlix. p. 273), in which he shows that the wind consists of a succession of pulsations of very short duration, of variable amplitude and direction, relatively to the mean movement of the wind. (3) On the strength of the wind in Belgium. This paper contains tables of the principal results of observations at Brussels from 1850 to 1889, showing *inter alia* the mean monthly velocity, the bi-hourly variation, the maximum velocity and its direction in each month. These tables afford valuable information for architects and engineers, and for any one requiring details as to the effect of the motion of the atmosphere.

Responsible measle-microbes, although suspected, have long eluded the diligent search of the investigator. Dr. Joseph Czajkowski, however, appears to have opened up the subject afresh by bacteriological researches which he has been carrying on for nearly four years on cases collected from four different epidemics of measles. Although the total number of cases bacteriologically examined was not great, amounting to only fifty-six in all, yet in every instance the same microbe was identified from the blood of measle patients, and is described as being a somewhat slender bacillus with blunted ends, producing occasionally threads in cultures some months old. No difficulty is experienced in staining it with the usual aniline colours, and in drop-cultures it is seen to be very motile. Gelatine and agar are not suitable for its growth; on the other hand, glycerin-agar and broth form convenient culture materials. As regards the pathogenic properies of Dr. Czajkowski's bacillus, the information is only at present limited to its action on rabbits and mice. The former experienced no inconvenience whatever after being inoculated with it, but the mice died in from three to four days, exhibiting symptoms of septicæmia, and the same bacillus was subsequently obtained in pure cultures from the blood, spleen, and liver of the infected animals. Perhaps the strongest evidence in favour of the author's researches is to be found in the fact that two other investigators, P. Canon and W. Pielicke, working at the subject quite independently of Dr. Czajkowski, discovered the same bacillus. Further inquiries must, however, be made before we can define with certainty the precise relationship to measles possessed by this new microbial claimant.

The last number of the *Mittheilungen von Forschungsreisen den und Gelehrten aus den Deutschen Schutzgebieten*, Bd. viii. Ht. 3, continues the scientific description of the German colonies. The first contribution deals with the Hinterland of the Cameroons, from materials collected during Dr. Passarge's expedition during 1893 and 1894. Schnauder has worked out a series of twenty longitudes. Passarge gives the data on which the altitude determinations rest, and some of the results. Dr. Limpricht has prepared three maps of the district on the scale of 1 : 350,000, and connected Passarge's routes with those of previous travellers in this region, viz. Barth, Flegels, Maistre, Zintgraff, and Baikie. The second contribution in the number is Stühlmann's description of the Uluguru Mountains, a district in German East Africa between Usambara and Usagara, and about one hundred miles inland. Geologically it consists mainly of gneiss, with some clay-slates, oolitic limestones and red sandstones, on the plains at the eastern foot of the mountains. Mica and graphite were the only minerals found, which Dr. Stühlmann thinks may be of economic value. The gneiss forms a plateau, to the east of which are the steppes of the "Vorland." The former is regarded as healthy and free from malaria. The author of this report has previously expressed the belief that the climate of eastern equatorial Africa was more humid than at present; he now attributes the change to artificial deforestation of the country. The most interesting paper in the number is one by St. Paul Hilaire, which gives an account of the laws of inheritance of the different tribes on the coast near Tanga. In the actual coast towns the people are either Mohammedan, or under Mohammedan influence, and the author has little new to record, except a list of native writings. The Bantu people of the district considered belong to four tribes, of which the report deals only with the Wa digo, one of the most intelligent people on the East African coast. St. Paul-Hilaire first states the laws on the inheritance of property, which passes to the relatives of the mother. Thus a man's wives and children are inherited by the nearest male maternal relative. The rest of the report summarises the rules in regard to marriage. The last article in the volume continues the publication of Dr. Steinbach's important meteorological observations on the Marshall Islands.

FOR several years the American Public Health Association has had a special committee on pollution of water supplies. At the meeting of the Association in Montreal, this committee recommended that a co-operative investigation be instituted with regard to the bacteriology of water supplies, and, as an outcome of this proposal, a convention was held in New York, in June last, to consider methods and elaborate a standard scheme of work which would secure some sort of uniformity in the differentiation of species of bacteria. The verbatim report of the proceedings of this convention (which was attended by most of the prominent American bacteriologists), together with the papers presented, make up the October *Journal* of the Association. The subjects considered relate almost exclusively to certain technical matters, which required elucidation before a satisfactory scheme of work could be drawn up; among these questions being: colour nomenclature for bacteriologists; how variability is to be regarded; the methods to be followed in determining the relation of bacteria to temperature; methods for the separation of bacteria into groups, and for the identification of species; the nature of the flagella, and their value in the systematic classification of bacteria; the grouping of water bacteria, and the influence of variations in the composition of nutrient gelatine upon their development. No decision was reached on any of the questions discussed; but the whole series was referred to a committee, with the understanding that the convention would accept its decision, and that its members would modify their laboratory methods in accordance therewith. The decisions of this committee have not, however, yet been published.

THE literature of marine biology has just been increased by the publication of the fourth volume of "Reports upon the Fauna of Liverpool Bay and the neighbouring Seas," written by the members of the Liverpool Marine Biology Committee and other naturalists, and edited by Prof. W. A. Herdman, F.R.S. The volume commences the record of the investigations carried on at the committee's biological station at Port Erin, Isle of Man. At this station, which was opened in 1892, several important investigations have already been carried out, and there is every reason to believe that the work will develop in the future, as the facilities for observations are increased. We notice among the papers included in the volume, one on the vascular systems of the Starfishes, by Mr. H. C. Chadwick, and another on the Cerata of Nudibranchs, by Mr. J. A. Clubb. There are also reports on Turbellaria, by Mr. F. W. Gamble; on Copepoda, by Mr. Isaac C. Thompson; on Nemertines, by Mr. J. H. Vanstone and W. I. Beaumont; on Medusæ, by Mr. E. T. Browne; and on Amphipoda, by Mr. A. O. Walker. These, with a valuable paper, by Dr. R. Hanitsch, on the nomenclature and classification of British sponges, and three reports, by Prof. Herdman, upon the work of the Liverpool Marine Biology Committee and their biological station, make up a very creditable volume. The Liverpool naturalists deserve to be congratulated for accomplishing so much work in a modest establishment, and without any funds except those raised by private subscriptions.

TWO memoirs on Entomophytes have recently been published. The one is by Mr. R. H. Pettit on "Studies in Artificial Cultures of Entomogenous Fungi," and emanates from the Cornell University Agricultural Experiment Station, U.S.A. The other is by Mr. A. S. Olliff on "Australian Entomophytes, or Entomogenous Fungi, and some account of their Insect-Hosts," and is issued by the Department of Agriculture, Sydney, N.S.W. Both are well illustrated, and deal largely with Cordyceps and Isaria. The loose, white, cottony growth which sometimes envelopes dead insects is a familiar sight, and Mr. Pettit, in discussing the possible use of entomogenous fungi for insecticidal purposes, refers to the suggestion that has been made to employ *Sporotrichum globuliferum* against the chinch-bug. Mr. Olliff is prepared to make the assertion that all the larger fungi of the genus Cordyceps live upon, and at the expense of, subterranean larvæ and pupæ, in proof of which he points to the fact that all the bulky species of which the hosts are definitely known have been found upon root-feeding insects. Of Hyphomyceteæ there are various minute entomogenous forms recognised as Australian. Some of these are variously found on aphides infesting pumpkin leaves, on dead ants, and on red scale of the orange. *Botrytis tenella*, Sacc. (*Isaria densa*), on larvæ and pupæ of Diptera, wasps, and cockchafers, has been introduced into Australia from Europe for the purpose of killing Lamellicorn larvæ, but the attempts have not succeeded. Mr. Olliff adds that in view of the large numbers of *Cordyceps Gunnii*, and *C. Selkirki* that are found in a limited area, and of the extensive injuries to useful timber and shade trees which often result from the attacks of the subterranean larvæ of Pielus and Trictena, the hosts of these parasitic fungi, it is evident that the native species of Cordyceps have a considerable economic value. He hopes that the Department of Agriculture at Sydney will shortly be able to make investigations to test the possibility of utilising these fungi artificially for the destruction of injurious root-feeding insects.

THE additions to the Zoological Society's Gardens during the past week include a Bonnet Monkey (*Macacus sinicus*) from India, presented by Mr. V. Roger; a Smooth-headed Capuchin (*Cebus monachus*) from South-east Brazil, presented by Major F. A. White; a Kittiwake (*Rissa tridactyla*), British, presented by Mr. Walter Butters, jun.; three Poë Honey Eaters (*Prosthemadera novæ-Zealandiæ*) from New Zealand, presented by Mr. Morton Campbell; a Bearded Lizard (*Amphibolurus barbatus*), a Diamond Snake (*Morelia spilotes*) from Australia, presented by Mr. Frederick G. Aflalo; a Four-lined Snake (*Coluber quadrilineatus*), European, presented by Captain Allen Keys; a Poë Honey Eater (*Prosthemadera novæ-Zealandiæ*) from New Zealand, deposited.

OUR ASTRONOMICAL COLUMN.

A NEW COMET.—A bright comet was discovered by Mr. Brooks, at Geneva, on November 21, in R.A. 9h 52m. and Decl. 17° 4′ S. An observation of the comet at Copenhagen shows that it is moving northwards at the rate of nearly three degrees per day. On November 24, at 17h. 37m. 9s., it was in R.A. 9h. 42m. 33s. and Decl. 10° 40′ 32″ S. The comet is not far from α Hydræ, and rises about 12.30 a.m.

COMET PERRINE.—The comet discovered by Mr. Perrine at the Lick Observatory, on November 16, was observed by Dr. Lamp at Kiel, on November 18, its position at 17h. 34·2m. Kiel mean time being R.A. 13h. 48m. 8s., Decl. 0° 50′ 24″ N. *Edinburgh Circular* No. 47 reports that the comet was also